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NOAA Report

May 28, 1991

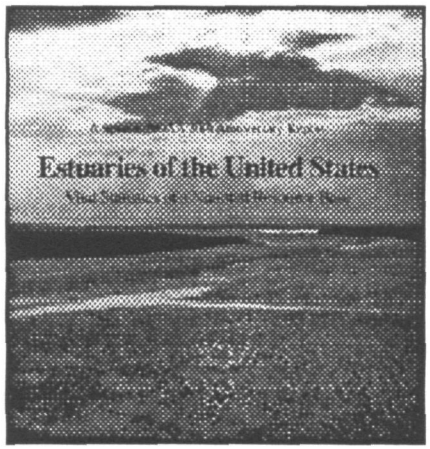
Report Summarizes Seven Years' Work

U.S. Estuaries 'Most Stressed Natural Area'

The nation's estuaries, because of their high economic value and high biological productivity, are among the country's most stressed natural areas, according to compelling new evidence in a recent NOAA study.

The 79-page report summarizes almost seven years of work to define and characterize the resources of the nation's estuaries. It provides the most complete and comprehensive quantification available of this important natural resource base.

The report, *Estuaries of the United States: Vital Statistics of a Natural Resource Base*, presents information on the physical and hydrologic characteristics, habitat, land use, population, pollution sources,



The report, *Estuaries of the United States*, was recently issued.

and fishery resources of 102 estuaries and their surrounding drainage basins.

Mid-Atlantic Leads Shellfishing

The report finds, for example, that estuaries in the Middle Atlantic region contain more approved shellfishing waters than any other region in the nation. Chesapeake Bay alone contains over 6300 square miles of approved shellfishing waters.

The NOAA report also says that a majority of the nation's coastal wetlands are concentrated in the Gulf of Mexico and South Atlantic regions, especially within the estuaries of South Florida and the Mississippi Delta.

S. California Highest Density

As expected, estuarine watersheds near major urban areas have the highest population density. The small estuarine drainage basins in Southern California have by far the highest population densities among the country's estuaries and Galveston Bay contains the highest concentrations of sources of industrial pollution.

The report also calculates an

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Global Precipitation Declined in 1980s

Yearly precipitation over land areas of the globe appears to have declined in the 1980s following a three-decade period of increase, a comprehensive set of NOAA rain and snowfall records reveals.

Preliminary analysis of information collected from up to 5,328 stations around the world indicates a period of predominantly dry conditions existed from the late 1800s to about 1950, followed by about 30 years of wetter conditions, according to Henry F. Diaz of NOAA's Climate Monitoring and Diagnostics Laboratory in Boulder, Colo.

The peak precipitation during this 30-year period was experienced around 1955 and again in the mid 1970s. A return to drier conditions occurred by the mid 1980s.

The precipitation records—some of which extend back 140 years—were compiled under a grant from the Department of Energy's Carbon Dioxide Research Program. The records, Diaz pointed out, have gaps in coverage over some continental areas such as South America and in desert and high mountain areas.

Nonetheless, he said, by presenting new information to climatologists and others, the data set should make a significant contribution to studies of climate change.

NOAA to Flight Test Doppler

An experimental, French-built dual-beam Doppler radar antenna will be test flown this summer aboard a NOAA aircraft flying hurricane research missions, the agency has announced.

Under development by the Paris-based Centre de Recherches en Physique de l'Environment (CRPE) for several years, the antenna will be installed on one of NOAA's two P-3 Orion aircraft as part of the on-board instrumentation package, allowing French and American scientists to evaluate its potential for meteorological research.

Rear Admiral F. D. Moran, Director of NOAA's Aircraft Operations Center in Miami, said the antenna is a prototype for a more sophisticated Doppler radar system being developed for installation aboard a research aircraft operated by the National Center for Atmospheric Research.

The beam from the new antenna electronically sweeps fore and aft alongside the aircraft's track as it parallels severe weather systems, collecting pseudo dual Doppler measurements which can be processed to determine three-dimensional wind fields. Earlier model radars require pilots to fly time- and fuel-consuming box patterns around and through storms to obtain a complete data set.

Mounted on the tail of the aircraft and enclosed in a fiberglass radome, the antenna consists of two electronically switchable elements which are fixed at 22.5 degrees fore and aft of a line perpendicular to the aircraft's track. As the elements rotate about the longitudinal axis of the aircraft, a receiver switches back and forth between them, alternately scanning ahead and behind the airplane.

Data on the reflectivity of clouds and precipitation, and on the motion of the air are then processed, using the P-3's on-board radar computer to produce vertical cross-sections and wind field maps.

The U.S./French engineering team plans to install the antenna on the P-3 early in July. After testing for airframe compatibility, the antenna will be used for research purposes during hurricane flights later in the year, Moran said.

Estuaries Called Most Stressed Natural Area in U.S.

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index of the "natural" ability of each estuary to retain and concentrate pollutants and concludes that estuaries in the north and middle Atlantic regions are, on average, the most sensitive to such problems.

'Fulfill Responsibilities'

"If we expect to sustain the health of estuaries throughout the U.S.," said Charles M. Ehler, director of NOAA's office of Oceanography and Marine Assessment, "we need actions now to fulfill our stewardship responsibilities."

He said those responsibilities include monitoring and periodic assessment, planning to prevent pollution, and taking remedial or restorative actions where possible.

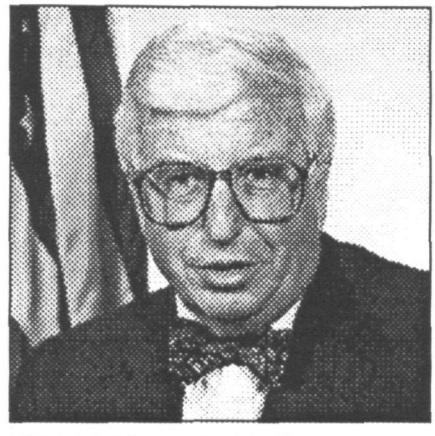
The report concludes that access to accurate, up-to-date information about the nation's estuaries is a fundamental requirement for restoring and preserving them.

Knauss Named to Whaling Commission

NOAA Administrator Dr. John Knauss has been named head of the U.S. delegation to the International Whaling Commission (IWC), an international body governing whaling regulations.

The IWC is now meeting in Reykjavik, Iceland, through the end of the month. The Commission was established in 1946 to "achieve the optimum level of whale stocks."

At the current IWC meeting, Japan, Norway and Iceland are expected to ask that the Commission end its ban on commercial whaling.



NOAA Administrator Dr. John Knauss was named to head the U.S. delegation to the International Whaling Commission

NMFS Agents Smoke Out Salmon Smugglers

Undercover Investigation on the High Seas

NOAA's National Marine Fisheries Service law enforcement officers broke an illegal salmon smuggling ring earlier this month by going undercover and exposing illicit salmon traffic from Taiwan, the People's Republic of China, Thailand, Chile and the United States.

During the past five years the NMFS has seized over one million pounds of salmon illegally imported in to the United States from Singapore, Hong Kong, and other far eastern ports. A total of 34 U.S. and foreign brokers have been federally indicted, charged and convicted.

In October of 1990, a joint undercover investigation with the Canadian Department of Fisheries and Oceans was launched as an addition to previous years investigative efforts. This investigation, *Operation Retread*, was directed at stopping the destruction of the northern pacific salmon.

The investigation exposed a pirate fleet of 30 to 90 Taiwanese driftnet vessels accused of harvesting salmon in the north pacific ocean from April through October 1990. The pirate vessels processed the salmon by immediately freezing each catch of the day on board ship and transferring the salmon cargo for storage in The People's Republic of China, Thailand and Singapore. The salmon were then smuggled into Chile and falsely documented as Chilean. Chile's legitimate production and exportation of salmon to the U.S. was thought to alleviate suspicion of the fish's origin.

The arrests on May 12, 1991 of Hermes Leone and Kunioki Takayama during last minute arrangements to smuggle 450 metric tons of illegally taken Taiwanese high seas salmon through China, Thailand and Chile to the United States concluded the undercover portion of this investigation. The black market price for the salmon about to be bought by undercover agents before the arrests was almost $1.14 million. More arrests and indictments are expected as a result of the NMFS agents findings.

"The one prevailing theme running throughout investigations similar to *Operation Retread* can be summed up in five letters G-R-E-E-D", said Wayne Lewis, the special agent in charge of law enforcement for the NMFS. "Millions of dollars can be made on a world wide market."

The northwest beat patrol for these NMFS officers consists of hundreds of thousands of miles of the northern pacific. Because of its size, it is very difficult to monitor. The patrol has only one plane to use for citing and catching illegal fishing boats. This reduces their coverage to only a few boats at a time. The effective use of undercover techniques "makes better use of their time and manpower, allows access from which they can penetrate criminal enterprises and reach the top conspirators, and aids in bringing illegal pirate fleets under worldwide scrutiny," said Lewis.

Over 20 million salmon have been caught by illegal driftnets in the past five years. This is more then four times the amount of all salmon caught by West Coast U.S. fisherman last year. "My primary concern is the potential for a resource disaster," said Lewis. "Illegal fishing has to be stopped or the resource will not survive."

All of Operation Retread's investigations have one theme in common: G-R-E-E-D.

Paper Recycling May Save $30K

On May 28, NOAA organizations at the Western Regional Center (WRC) in Seattle will expand their paper recycling program with an effort that could save a considerable amount of money for the agency.

With full participation of all activities on the site the new recycling program being instituted by the Western Administrative Support Center (WASC) could cut recycling costs by nearly 50 percent. That has a

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WSO Helps in Las Vegas Poisonous Gas Leak Emergency

Las Vegas may be the gambling capital of the country, but one thing local emergency services teams didn't want to bet on was the direction of the wind after a chlorine gas leak. That's why they called on their local Weather Service Office (WSO).

A local chlorine plant suffered a massive, 500,000 gallon gas leak in nearby Henderson, Nev., eight miles southeast of Las Vegas one morning earlier this month. While the calm winds kept the poisonous cloud from spreading quickly, those winds were supposed to pick up by the afternoon, putting nearly 10,000 residents at risk.

The Clark County emergency service unit contacted the Las Vegas WSO which took wind direction and speed measurements, along with a team from the National Weather Service's Nuclear Support Office. Evacuation of the 10,000 residents in the cloud's path went smoothly, thanks in part to updates issued every half hour by the WSO. The leak was contained later that morning, and the residents were allowed to return to their homes by 10:30 that morning.

Helping local authorities in the evacuation were Frankie Taylor, Las Vegas WSO meteorologist in charge, and Dan Riddy, another WSO meteorologist.

Paper Recycling to Save Western Region $30K

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potential for an annual savings of almost $30,000.

In announcing the program, Kelly Sandy, WASC Director, Sandy advised everyone that members of the WASC program management staff will work with each organization to set-up and initiate the program, plan training sessions, and establish a network of coordinators throughout the WRC.

Each employee will have their own deskside or desktop container. An additional 45 collection drums will be located in office areas to handle the increased load. When desktop containers are full, employees will empty the contents into the collection drums.

In addition to saving money the new program will place greater controls on waste, act to conserve our national resources and place NOAA in a recycling leadership role within the federal community.

Coming Events — May 1991

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26	27 Memorial Day	28	29	30 House Merchant Marine & Fisheries mtg.	31 Houston Hurricane Awareness workshop	1

June 1991

2	3	4	5	6	7	8
International Association for Great Lakes Research conference, in Buffalo, NY				Coastal Ocean Science wking grp	Cooperative Centennial Celebration, honors NWS co-op stations in Colorado & Wyoming	

National Oceanic and Atmospheric Administration

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